

IN THE CLAIMS:

1. (Cancelled)

2. (Previously Presented) The plasma display panel manufacturing method of Claim 28, wherein

in the sealant layer forming step, the sealant layer is formed with either plural protrusions or plural depressions in at least one part of the sealant layer formed at predetermined intervals on the at least one of the peripheral regions of the panels to provide the spaced open gaps.

3-27. (Cancelled)

28. (Previously Presented) In a plasma display panel manufacturing method for providing an improved plasma display panel with cells of phosphor layers including a blue phosphor layer with an improved chromaticity coordinate, the improvement comprising the steps of:

forming a sealant layer, about a peripheral region of main surfaces of a front panel and a back panel facing each other to provide cells of phosphor layers, the sealant layer is arranged in contact with both the periphery of the front panel and back panel to provide a plurality of spaced open gaps about the periphery to provide egress to an open space containing the cells between the facing front panel and back panel;

circulating a dry gas, wherein a partial pressure of steam included in the dry gas atmosphere is 130 Pa or lower, through the spaced open gaps to remove any absorbed gases from the manufacturing of the front panel and back panel;

13 initially heating the entire facing front panel and back panel to release the
14 absorbed gases while circulating the dry gas through the spaced open gaps;

15 continuing the heating of the entire facing front panel and back panel at a
16 temperature to soften the sealant layer sufficiently to gradually close the spaced open gaps while
17 maintaining the circulation of the dry gas until the peripheral region is sealed wherein the
18 chromaticity coordinate, y , in the CIE color specification of luminescent color of light emitted
19 from only cells including the blue phosphor layer is 0.08 or lower; and

20 moving the facing front and back panels with the sealant open gaps through an
21 oven while directing dry gas through nozzles toward side peripheral regions including the spaced
22 gaps as the spaced gaps are gradually closed by an application of pressure.

1 29. (Cancelled)

1 30. (Previously Presented) The plasma display panel manufacturing method of Claim
2 28 wherein the height of the opening gap between the front and back panel is greater than 300
3 μm .

1 31-53. (Cancelled)

1 54. (Currently Amended) A plasma display panel sealing apparatus for sealing a
2 front panel and a back panel that have been placed facing each other with a sealant layer between
3 outer regions of the panels by heating the panels and the sealant layer, the sealing layer is
4 positioned between a periphery of the front panel and the back panel to provide gaps,
5 comprising,

6 a gas circulating unit for directing heating gas to the gaps on the peripheral sides
7 of the panels so as to circulate the heating gas through the gaps from the outer regions of the
8 panels to an inner space between the panels and to release the heating gas through the gaps.

1 55-75. (Cancelled)

1 76. (Previously Presented) The plasma display panel manufacturing method of Claim
2 28 wherein the initial heating temperature is approximately 250°C and the continuing heating
3 temperature is approximately 410°C or higher to soften the sealant layer.

1 77. (Previously Presented) The plasma display panel manufacturing method of Claim
2 28 wherein the circulating of dry gas occurs within the oven and the nozzles direct the dry gas to
3 provide an unrestricted flow of dry gas towards the spaced open gaps in a peripheral region of
4 the front panel and back panel.

1 78. (Previously Presented) The plasma display panel manufacturing method of Claim
2 77 wherein the ratio of an initial forming of the spaced gaps along the peripheral region to the
3 remaining sealant layer contacting the front and back panels is 50%.